

# DAKOTA CITY, NEBRASKA

## Information Technology Assessment and Plan



2004

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## INTRODUCTION

The University of Nebraska's Technologies Across Nebraska (TAN) initiative, in partnership with the Nebraska Information Technology Commission's Community Council awarded a \$2,500 mini grant for information technology planning efforts to the City of Dakota City, Nebraska.

The City of Dakota City formed an Information Technology Committee and began an information technology assessment and planning process in January 2004. Information Technology (IT) is the use of hardware, software, services, and supporting infrastructure or networks and delivering information using voice, data, and video. The purpose of the assessment is to identify research and gain a clearer understanding of the benefits of technology related networks, services or programs.

Like other rural cities with limited resources, Dakota City is struggling to improve the community in all areas and encourage population growth. Leadership recognizes that staying educated in technology will enhance the city's opportunities.

As community leaders become more knowledgeable about information technology issues and services, a more thorough plan with long-term goals can be developed. Communities vary in size and are diverse in their needs but it is important for community leaders to be aware of the importance of information technology and work together to continue to stay informed as technology services, changes and new options become available.

Dakota City is located in Dakota County, Nebraska. When visiting Dakota City, you will always receive a friendly small town welcome. The citizens of Dakota City are family orientated, hard working and value friendships.



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Dakota City determined that all priority areas were important to consider regarding information technology. Community leadership, telecommunications infrastructure, technology literacy and access, advanced technology training, economic development, e-commerce, community services and information together play an important role in community information and technology planning. Dakota City's Information Technology (IT) Committee has worked with Siouxland Interstate Metropolitan Planning Council over the past year to develop an IT Plan for the city.

The IT Committee met in the Dakota City Hall. The City Hall was newly constructed in the past two years offering an abundant amount of space with modern facilities. The residents take pride in the structure maintaining it annually.

The Information Technology (IT) Committee rated Dakota City as an Emerging Information Age Community. Emerging Information Age Communities are diverse in their needs and in the maturity of their IT leadership.

They may be new to the strategic planning process, may have begun the strategic planning process but need to reenergize their leadership, or may be well on their way to becoming Information Age Communities. Forming countywide or regional partnerships to address IT issues may help communities leverage their existing resources. Emerging Information Age Communities may want to consider the following:

- Strengthen partnerships within the community and region
- Encourage community leaders to attend regional, statewide or national conferences or workshops on IT development
- Encourage community leaders to utilize e-mail discussion lists or Web sites for information on IT development
- Host a technology fair
- Host a community IT tour to see firsthand how local businesses, schools, health care providers, the library, and governments are using IT
- Tour an Information Age Community
- Host introductory and advanced computer, Internet, and networking classes

- Host introductory and advanced e-commerce classes
- Integrate IT into community and economic development plans and processes
- Encourage the development of IT support services within the community or region
- Encourage entrepreneurship development
- Examine current regulations to see how they impact Information Age businesses
- Help businesses move from static Web sites to conducting transactions online
- Encourage the deployment of advanced services and stimulate competition
- Address youth retention through school to work or other initiatives
- Increase local services and information available online or through other IT technologies
- Address quality of life issues

Internet usage of high-speed networks alone to homes and businesses continue to increase driving the demand for networks with higher speeds and more capacity to send and receive information. The Federal Communications Commission (FCC) reported the following increases in broadband high-speed networks:

2003 – 28.2 Million Users, 40.7% increase

2002 – 19.9 Million Users, 55.5 % increase

2001 – 12.8 Million Users

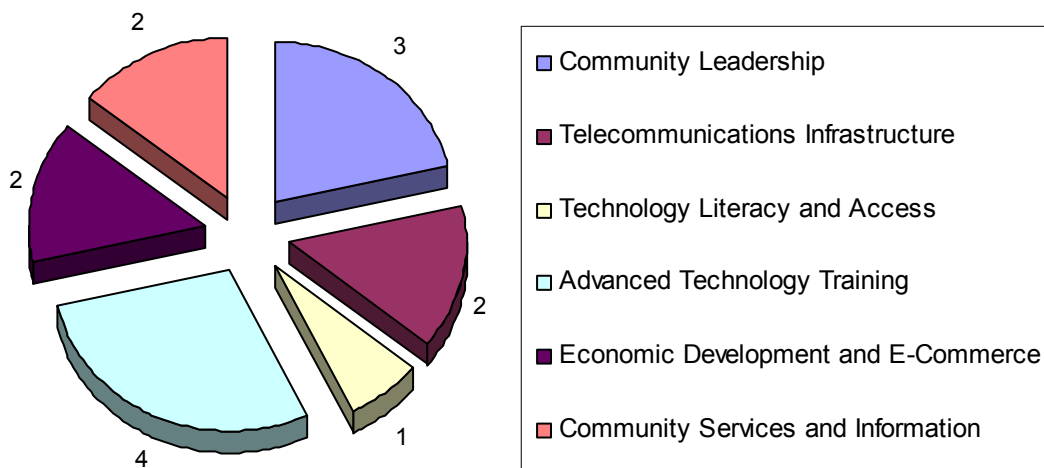
Dakota City's present level of e-readiness has been determined and a target level has been set. Each area (community leadership, telecommunications infrastructure, technology literacy and access, advanced technology training, economic development, e-commerce, community services) was evaluated using a four-point scale, with level four being the highest level. For each area of e-readiness, an action

plan has been developed to reach their target level.

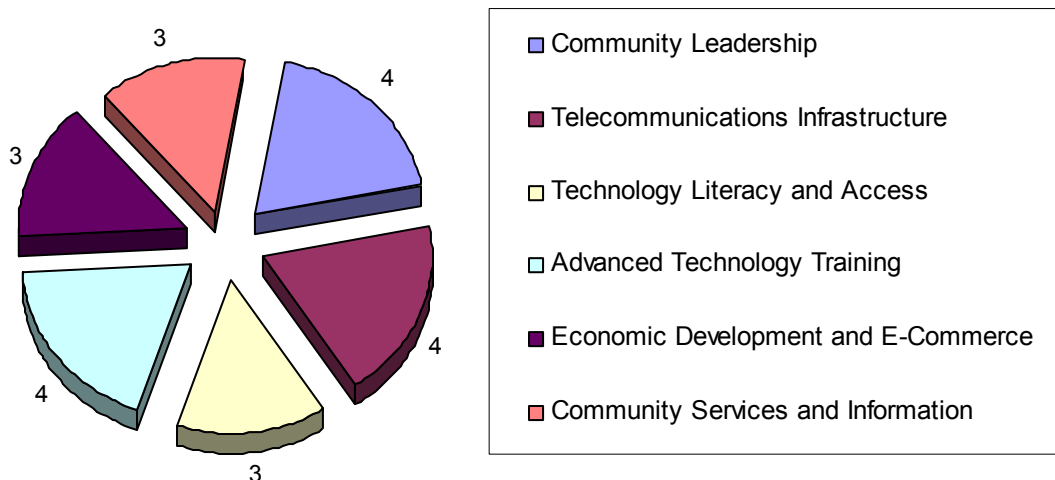
The following chart illustrates Dakota City's current and target levels of e-readiness:

## Current and Target Levels of E-Readiness

**Dakota City E-Government Readiness Rating**  
“How well community leaders address IT development”



**Dakota City IT Government E-Readiness Rating**  
“How community would like to score in 2 – 5 years”.



## Community Leadership

Community leadership is a vital component of community and economic development efforts. Strong community leadership in IT is important because:

- IT can be used more efficiently and cost-effectively in distributing information.
- Leads to greater civic involvement and community support.
- Most successful IT efforts in communities have been locally driven.
- A local core group of committed, well-connected individuals is the single most important predictor of success.
- Effective community leaders build connections within the community, state and even on the federal level
- Information Age development doesn't require community leaders to know all of the answers.
- Requires community leaders who have a passion, vision and commitment to find answers.
- Must understand IT needs of different sectors of the community.
- A shared community IT vision provides direction for a community's IT efforts.
- Cities are often dependent upon leadership having a proactive IT awareness and strategy.
- Once community leadership is working together towards a common goal, communication efforts to the community will be positive and consistent.

Continued efforts should be made to strengthen this area. The Information technology committee used the following scale to evaluate community leadership:



1. Many business and community leaders do not understand the importance of information technology. There is little community support for IT-related development.
2. Some business and community leaders understand the importance of information technology but the community or region is not addressing information technology development. There is some community support for IT-related development.
3. Many business and community leaders understand the importance of information technology and there are efforts to cooperatively address information technology development. There is moderate community support for IT-related development.
4. All key community and business leaders understand the importance of information technology and are working cooperatively to address information technology development. There is widespread community support for IT-related development.

### **Current E-Readiness Level**

On a scale of one to four, Dakota City is at level two in the area of community leadership. While many community leaders understand the importance of information technology development, the community as a whole has not worked together to address information technology development until now.

### **Strengths**

Dakota City has a strong history of working together and researching ways for the community to continue to strive. The city has progressive thinking and supportive Mayor and City Council, positive business involvement, well-represented Information Technology Committee and strong regional cooperation and resources available to the city.

The city's membership with Siouxland Interstate Metropolitan Planning (SIMPCO) provides a communications link and information source. The city council is always looking for ways to strive and gain information that could benefit their village.

### **Resources and Assets**

Dakota City has leadership with a strong desire and need to stay informed. There are many leadership groups both in Dakota City and in the region. The city values relationships with SIMPCO, neighboring cities, villages and the county while

recognizing them as information resources for the community.

### **Target E-Readiness Level**

In two to five years, their goal is to be at level four.

### **Action Plan**

The Information Technology Committee will inform the City Council of the assessment and planning process. A more thorough assessment of this area does not need to be done however community leaders should continue to understand IT and how it relates to the needs of the community.

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## **Telecommunications Infrastructure**

Telecommunications infrastructure is becoming increasingly important for both small and large businesses, education, health care and government services. A brief history of telecommunications networks:

Telegraph was invented and used for short text messages in 1840. In 1876, the telephone consisted of a box shaped instrument containing magnets that generated electrical current to transmit speech. Telephones were used in pairs allowing communications between one sender and one receiver. The public switched telephone network was eventually designed for voice telephone calls.

Eventually switching centers (called central offices) were devised using analog signals allowing connectivity to more than one person. Spoken words were transmitted using analog technology until late 1960's. Today's telephone system is made up of the same basic components as in 1876, but the technology has significantly improved. Much of the public telephone network has been converted to digital technology however portions of the network are still analog technology.

Analog and digital signals are different. Analog is like flying a small propeller plane and digital is like flying in a jet. As technology continues to improve using graphics, video and pictures it takes more capacity on a network to send and receive that kind of information. Broadband or higher speed and higher capacity networks continue to be needed.

The information technology committee used the following scale to evaluate telecommunications infrastructure:

1. Cable modem, DSL or wireless services are not available in the community.
2. Some homes and business have cable modem, DSL or wireless service available.
3. Many residences and business have cable modem, DSL or wireless service available.
4. All residences and business have cable modem, DSL or wireless service available. Satisfaction with broadband services is high.

### **Current E-Readiness Level**

On a scale of one to four, Dakota City is at level two in the area of telecommunications infrastructure. Within the past year, the availability of broadband services within the county has greatly improved. Some rural residents of the county are located very close to a fiber optic network while others aren't; however, construction of such networks is still taking place.

### **Strengths**

Many telecommunications service providers serve the area such as Sprint, Cellular One, Fibercomm, Qwest, and Evertec. Currently dial-up Internet and Digital Subscriber Line (DSL) services are available to the city residents. The public school system is connected to a fiber optic network and recently the City Hall gained the same connection offering broadband high-speed access.

### **Resources and Assets**

The City of South Sioux City has worked with the City of Dakota City to extend fiber optic connectivity to the city. Siouxland Interstate Metropolitan Planning Council (SIMPCO), Statewide Communications Alliance of Nebraska (SCAN) and Nebraska Information Technology Commission (NITC) are additional resources.

### **Target E-Readiness Level**

In two to five years, our goal is to be at level four.

## Action Plan

With this information, the information technology committee will stay informed of additional telecommunications services that come available. They felt a more thorough assessment of this area need to be done. Younger people are utilizing computers and the Internet daily in school and will expect it in their adult life driving the need for adequate networks, computers and technologies.

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## Technology Literacy and Access

In order to realize the benefits of the Information Age, community members must have access to information technology and must know how to use it. An estimation was used in considering those in Dakota City who understands technology and has access to the Internet. The information technology committee used the following scale to evaluate technology literacy and access:

1. Less than 50% of households are online and public access to computers and the Internet is very limited.
2. Approximately 50% of households are online and public access to computers and the Internet is available in at least one location twenty or more hours a week.
3. Over 50% of households are online and public access to computers and the Internet is available in at least one location at times convenient for most users.
4. At least 75% of households are online and at least 75% of adults are Internet users. Mobile access to the Internet through WIFI networks is available in several areas in the community.

## Current E-Readiness Level

On a scale of one to four, Dakota City is at level one in the area of technology literacy and access. The committee estimates that approximately over 50% of households are online.

## Strengths

Dakota City has local colleges available for many different types of classes regarding technology and hardware. The local library does have computers and

Internet access for the public. Neighboring communities offer technology services.

### **Resources and Assets**

Dakota City has very few resources and assets while valuing their rural environment. It is important that the city stay involved with their local school system, city hall and keep relationships with NNTC, SIMPCO, and NITC.

### **Target E-Readiness Level**

In two to five years, our goal is to be at level three.

### **Action Plan**

A community technology center, increased computers and phone lines in the library and Internet access and technologies for the low-income families are some of the area's that need to be explored.

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## **Advanced Technology Training**

In order to realize the benefits of the Information Age, community members must have access to information technology and must know how to use it. The information technology committee used the following scale to evaluate advanced technology training:

1. No advanced technology training opportunities are available in the community or area.
2. Some advanced technology training opportunities are available in the community or area.
3. Most advanced technology training needs can be met in the community or area.
4. All advanced technology training needs can be met in the community or area.

### **Current E-Readiness Level**

On a scale of one to four, Dakota City is at level four in the area of advanced technology training.

## **Strengths**

The community has advanced technology training available in neighboring communities and through local colleges, universities and graduate center.

## **Resources and Assets**

Dakota City not only has resources and assets available in the city, they stay involved with their local school system and keep relationships with NNTC, SIMPCO, and NITC

## **Target E-Readiness Level**

In two to five years, our goal is to be at level four.

## **Action Plan**

Stay involved with local schools and colleges to find advanced technology training opportunities. More local access to training is needed and researching grants to assist in funding a Community Technology Center and computers for the library.

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## **Economic Development and E-Commerce**

Communities are finding that adequate telecommunications infrastructure is necessary to recruit new businesses and to retain existing businesses. Information technology can also help local businesses expand markets, reduce costs, and improve customer service. Today's fast-paced business world is driven by technology, knowledge and innovation. Technology, innovation and education are becoming the driving factors behind diversification.

Technology will offer new challenges, new opportunities and will improve our quality of life. Education will prepare the citizens of the Dakota City to excel in our rapidly changing world. Knowledge, innovation and diversification will produce a vibrant, competitive Dakota City that will meet and exceed the challenges of the new economy.

Promoting an aggressive technology environment, developing collaborative programs and building partnerships for the technology-driven economic progress of Dakota City businesses is also important.

Dakota City continues to retain their main street businesses. The City Council has been making an effort to encourage businesses to locate in the city. Dakota City has an economic development group and participates in the Dakota County Economic Development Group.

The information technology committee used the following scale to evaluate economic development and e-commerce.

1. Economic development efforts do not address Information Age businesses. Few local businesses are using information technology to improve productivity and expand markets.
2. There is some recognition in the community that information technology is an economic development tool. Some local businesses are using information technology effectively to improve productivity and expand markets.
3. Economic development efforts are beginning to target Information Age businesses. Most small businesses are using information technology effectively to improve productivity and expand markets. At least 50% of businesses have a Web site and 85% of businesses are online.
4. Economic development efforts are tied to the needs of Information Age businesses. Nearly all-small businesses have integrated information technology into their business processes and plans.

### **Current E-Readiness Level**

On a scale of one to four, Dakota City is at level two in the area of economic development and e-commerce.

### **Strengths**

Dakota City has a pro-active City Council which participates in the county's

economic development efforts, offers low interest loans to assist businesses, has a positive workforce, low tax base, access to multiple transportation routes and adjoins an urban area.

### **Resources and Assets**

The University of Nebraska Extension program offers the Nebraska Electronic Main Street program and the EDGE training program for entrepreneurs. The area university offers college offers courses in e-commerce.

### **Target E-Readiness Level**

In two to five years, our goal is to be at level three.

### **Action Plan**

The committee felt a more thorough assessment of this area should take place.

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## **Community Services and Information**

Community services encompass a very broad area. Maintaining efficient facilities and providing a variety of services for Dakota City continues to be important and challenging.

Telecommunications infrastructures and services are necessary to enhance such services. With broadband high-speed Internet access, libraries have access to a large variety of on-line resources; educational institutions use IT to enhance teaching beyond the traditional classroom and offer distance learning capabilities; government services are being offered on-line to the public; healthcare institutions use telemedicine to transmit and receive healthcare services remotely and public safety equipment for first responders used to communicate in the event of an emergency is improving.

Access to a wider range of information is a critical component for community services, in order to retain and expand their services and meet the needs of the people. Dakota City rated this section two because of the citizens utilizing such services in the area. The Information Technology Committee evaluated the following community services:

- Public Library Services – Dakota City has a public library.



- Education – Dakota City has a K-5 school system, 6-12 is located in South Sioux City.
- Health Care – Dakota City has no health care facilities. Citizens utilize South Sioux City, Nebraska or Sioux City, Iowa for such services.
- Local Government Services – Local government does have a Web site and utilizes the Internet for government services.
- Non-profits, Arts, Culture, and History – Dakota City has no non-profit organizations.

### **Action Plan**

Even though community services are limited in the village, Dakota City will continue to make an effort to retain their existing services while encouraging more. The availability of technology could be beneficial in doing that.

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### **Social Capital**

The networks that constitute social capital also serve as conduits for the flow of helpful information that facilitates achieving our goals. Social capital also operates through psychological and biological processes to improve individual's lives. Community connectedness is not just about warm fuzzy tales of civic triumph.

In measurable and well-documented ways, social capital makes an enormous difference to our lives. The basic premise is that interaction enables people to build communities, to commit themselves to each other, and to knit the social fabric. A sense of belonging and the concrete experience of social networks can bring great benefits to people.

Information Technology can play a part in social capital and assist in a community advancing. The IT Committee is very much aware that technology as a whole plays an important part in the future of the city.

There are good communications between the citizens of Dakota City. The

community works together in taking care of the community and planning community events and strategies. The city uses the Internet to access information valuable to the community. The Internet is a valuable tool and opens up a large resource base for the citizens and leadership.

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## Quality of Life

Quality of life is an individual's satisfaction or happiness with life in domains he or she considers important. It is the broadest of all concepts we are concerned with, being influenced by all of the dimensions of life that contribute to its richness, reward and pleasure.



Quality of life is very important to the citizens of Dakota City. Dakota City is a safe, clean and friendly rural city located in Dakota County. The city is located on the Missouri River which provides a beautiful scenic setting. With Information Technology, fiber optic's and other types of networks and services located in and near the city, an IT worker could re-locate there and work from their home office in a beautiful rural setting only a short distance from urban areas.

Housing is available and the city staff and volunteers maintain city parks with camping pads, picnic tables, playground equipment and boat ramp access to the Missouri River. Many of the citizens gather there to socialize while their children play.

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## Vision Statement

**Dakota City's community vision is:**

*Dakota City is a quiet, family-oriented community with...*

- Nearby urban amenities

- Affordable housing for each state of life
- Convenient, locally owned retail businesses
- Excellent public services including education, recreation, **state-of-the-art technology**, transportation, sidewalks and trails

*We value...*

- Children and families
  - Community independence
  - Partnering with our neighbors to attain regional goals and efficiencies
  - Educational and recreational opportunities for all people
- 

## Information Technology Goals

The IT Committee spent a great amount of time over the past year participating and researching IT related information related to Dakota City. They considered the importance of IT and the fact that it is rapidly growing, how it will affect Dakota City now and in the future.

As a result of the IT As a result of the information technology assessment and planning process, the IT Committee decided upon the following goals:

1. Continue learning more about Information Technology (IT) and how it can benefit the citizens of Dakota City.
2. For City Council and staff to continue researching IT solutions, services and alternatives.
3. Assist the library in acquiring more computers and access to state resources.
4. Research how many households in Dakota City have computers and Internet services.

5. Continue interest in school's level of IT services and computers.